

CLAIMS:

1. Method for recording an information stream (M) on a record medium (2), the information stream comprising a plurality of alternative streams (VS1; VS2; VS3) and at least one common part (AS1; AS2; GS1; GS2), wherein the alternative streams (VS1; VS2; VS3) of the information stream are recorded in an interleaved manner;
 - 5 wherein each of the alternative information streams (VS1; VS2; VS3) is divided into alternative information stream blocks (VSB1(i); VSB2(i); VSB3(i)); wherein each of the common information stream parts (AS1; AS2; GS1; GS2) is divided into common information stream blocks (ASB1(i); ASB2(i); GSB1(i); GSB2(i)); and wherein the information stream is recorded as a succession of consecutive interleaved units (IU(i)), each interleaved unit (IU(i)) comprising one corresponding block (ASB1(i); ASB2(i); GSB1(i); GSB2(i)) of each of the common information stream parts (AS1; AS2; GS1; GS2) and one corresponding block (VSB1(i); VSB2(i); VSB3(i)) of each of the alternative information streams (VS1; VS2; VS3), the common information stream blocks being separate from the alternative information stream blocks.
- 15 2. Method according to claim 1, wherein two or more of the common information stream blocks of one interleaved unit are combined into one multiplexed block separate from the alternative information stream blocks.
- 20 3. Method according to claim 1, wherein the information stream comprises a plurality of selectable common streams (AS1; AS2; GS1; GS2) of different type (A; G); and wherein, in each interleaved unit (IU(i)), a plurality of selectable blocks (ASB1(i); ASB2(i); GSB1(i); GSB2(i)) is recorded, each selectable block corresponding to a respective one of said plurality of selectable common streams (AS1; AS2; GS1; GS2).
- 25 4. Method according to claim 1, wherein the information stream is an audiovisual stream comprising a plurality of alternative moving pictures (VS), one or more common audio streams (AS), and optionally one or more common graphics streams (GS).

5 Method according to claim 4, wherein the audiovisual stream comprises NA user-selectable audio streams (AS1, AS2), NG user-selectable graphics streams (GS1, GS2), and NV user-selectable video streams (VS1, VS2, VS3);
 and wherein, in each interleaved unit (IU(i)), NA audio blocks (ASB1(i),
5 ASB2(i)) and NG graphics blocks (GSB1(i), GSB2(i)) and NV video blocks (VSB1(i),
 VSB2(i), VSB3(i)) are recorded.

6. Method according to claim 1, wherein the record medium (2) is an optical disc.

10

7. Record medium (2), preferably an optical disc, containing an information stream comprising a plurality of alternative streams (VS1; VS2; VS3) to be selectively outputted and at least one common stream (AS1; AS2; GS1; GS2) to be outputted simultaneously with the selected alternative stream, said streams being recorded on said 15 medium in an interleaved manner;
 wherein a track (3) of the record medium (2) contains a succession of consecutive interleaved units (IU(i)), each interleaved unit (IU(i)) comprising one corresponding block (ASB1(i); ASB2(i); GSB1(i); GSB2(i)) of each of the common information stream parts (AS1; AS2; GS1; GS2) and one corresponding block (VSB1(i);
20 VSB2(i); VSB3(i)) of each of the alternative information stream parts (VS1; VS2; VS3), the common information stream blocks being separate from the alternative information stream blocks.

8. Record medium according to claim 7, wherein two or more of the common 25 information stream blocks of one interleaved unit are combined into one multiplexed block separate from the alternative information stream blocks.

9. Record medium according to claim 7, wherein the information stream is an audiovisual stream comprising a plurality of alternative moving pictures (VS), one or more common audio streams (AS), and optionally one or more common graphics streams (GS).

30

10. Record medium according to claim 9, wherein the audiovisual stream comprises NA user-selectable audio streams (AS1, AS2), NG user-selectable graphics streams (GS1, GS2), and NV user-selectable video streams (VS1, VS2, VS3);

and wherein each interleaved unit (IU(i)) comprises NA audio blocks (ASB1(i), ASB2(i)) and NG graphics blocks (GSB1(i), GSB2(i)) and NV video blocks (VSB1(i), VSB2(i), VSB3(i)).

5 11. Method for reading a record medium according to claim 7, the method comprising the steps of:

- a) selecting at least one common information stream (AS1, GS2);
- b) selecting one (VS2) of the alternative information streams (VS1, VS2, VS3);
- c) reading the common information stream block (ASB1(i); GSB2(i)) of said at 10 least one selected common information stream (AS1, GS2) associated with one interleaved unit (IU(i));
- d) storing the information from the one common block read into a buffer memory (MA; MG);
- e) reading the alternative information stream block (VSB2(i)) of the selected one 15 (VS2) of the alternative information streams (VS1, VS2, VS3) associated with said one interleaved unit (IU(i));
- f) simultaneously outputting the alternative information stream block (VSB2(i)) in combination with the common information stream block (ASB1, GSB2) from said buffer memory (MA; MG).

20 12. Method according to claim 11, wherein steps (c)-(f) are repeated for each following interleaved unit (IU(i+1)).

13. Method according to claim 11, wherein the information stream recorded on 25 said record medium comprises a plurality of selectable common streams (AS1; AS2; GS1; GS2) of different type (A; G); and wherein each interleaved unit (IU(i)) comprises a plurality of selectable blocks (ASB1(i); ASB2(i); GSB1(i); GSB2(i)) each corresponding to a respective one of said plurality of selectable common streams (AS1; AS2; GS1; GS2);

30 the method comprising the steps of:

- a) for each common stream type (A; G), selecting one of said plurality of selectable common streams (AS1; GS2);
- b) selecting one (VS2) of the alternative information streams (VS1, VS2, VS3);
- c) for a first common stream type (A), reading the block (ASB1(i)) of the

selected common stream (AS1) associated with one interleaved unit (IU(i));

- d) storing the information from this block (ASB1(i)) in a buffer memory (MA) of first type;
- d2) repeating steps (c)-(d) for all remaining common stream types (G);
- 5 e) reading the alternative information stream block (VSB2(i)) of the selected one (VS2) of the alternative information streams (VS1, VS2, VS3) associated with said one interleaved unit (IU(i));
- f) simultaneously outputting the alternative information stream block (VSB2(i)) in combination with all common information stream blocks (ASB1; GSB2) from the buffer 10 memories (MA; MG).

14. Drive (10) for reading a record medium according to claim 7, the drive being adapted to execute the method according to claim 11.

15 15. Drive according to claim 14, comprising:

- reading means (5) for reading the record medium (2);
- an actuator (6) for positioning the reading means with respect to the track (3) of the record medium (2);
- a controller (30) for controlling the actuator (6), the controller having an input 20 receiving a read signal (SR) from said reading means (5); the controller being provided with at least one buffer memory (MA; MG) for storing the blocks of at least one of the common information streams.

16. Drive according to claim 14, adapted to execute the method according to claim 25 13, wherein the controller is provided with a plurality of buffer memories (MA; MG) of different type, for storing the blocks of the selected common information streams of different type.

30 17. Drive according to claim 14, further comprising a buffer memory (MV) for storing information from the selected alternative information stream (VS2).

18. Drive according to claim 14, further comprising user input means (11) for allowing a user to input a selection of an alternative information stream (VS2) and a selection of at least one common information stream (AS1; GS2).

19. Audio/video reproduction system (1), comprising a disc drive according to any of claims 14-18, the system further comprising a display device (20) comprising at least one screen (21) for displaying images and at least one loudspeaker (22) for generating sound.